

## REMARKS

### 1. Preliminary Remarks

#### a. Status of the Claims

Claims 25, 26, 29, 30, and 35-38 are pending and under active consideration. Claims 25, 26, 29, and 30 are allowed. Claims 35-38 are amended. Applicant respectfully requests entry of the amendments and remarks made herein into the file history of this application. Upon entry of the amendment, claims 25, 26, 29, 30, and 35-38 will be pending and under active consideration.

#### b. Amendment to the Claims

In order to expedite prosecution and without prejudice to seeking claims of broader scope in a continuing application, claims 35-38 have been amended in part to a vector comprising a human insert, wherein the human insert consists of the sequence of the nucleic acid of claim 25, 26, 29, or 30 and wherein the vector comprises no other insert but the nucleic acid of claims 25, 26, 29, or 30.

#### c. Amendment to the Specification

On pages 3 and 4 of the Office Action, the Examiner asserts that the application contains disclosure entirely outside the bounds of the allowed claims. The Examiner further asserts that the Applicant is required to modify the brief summary of the invention as well as amend the specification to include all descriptive matter pertinent to SEQ ID NOS: 159 and 6821380. The Examiner further requests that the additional disclosure from Tables 1-14 that do not relate to SEQ ID NO: 159 and 6821380 be removed.

Applicant has amended the Summary of the Invention to be in harmony with the claims. The Detailed Description has also been amended to include all descriptive matter pertinent to SEQ ID NOS: 159 and 6821380 from Tables 1 through 14 in the replacement text of paragraphs [0319]-[324], [378], [596], [598], and [600]. Support for the replacement text of paragraphs [0319]-[324], [378], [596], [598], and [600] can be found in Table 1, line 342; Table 2, lines 144957-145050; Table 3, lines 4459-4460; Table 4, lines 8129-8133; Table 5, 5176-5177; Table 6, lines 1178498, 1355054, 1386260, 2801044, 2843616, 2967386, 6221084, 6534578, 6595452, 8186458, 9869798, and 12224466; Table 7, lines 146394-146401 and 146419-146422; and Table 8, lines 435532-435559; Table 9, lines 37973-38086; Table 10, lines 738572-738658; Table 12, 233-257, 328-371, 485-492, 553-566, and 755-782; Table 13, line 549; and Table 14, lines 31-44, 88-103, 123-134, 192-210, 238-242, 342-351, 426-439, 451-453, 547-549, 608, and 671-688. Unrelated descriptive matter to SEQ ID NOS: 159 and 6821380 has been deleted from Tables 1 through 10. Finally, the description

added after the title “Detailed Description” can be found in the originally filed Summary of Invention. Applicant respectfully submits that no new matter has been introduced through these amendments and submits that the specification is in compliance with 37 C.F.R. 1.52(e)(5). In view of the foregoing amendments, Applicant respectfully request that the objection to the specification be withdrawn.

**d. Interview Summary**

The undersigned would like to thank the Examiner for the courtesy of the telephone interview on July 17, 2009, wherein the objections to the specification were discussed. The amendment to the specification provided herein are reflective of the possible amendments proposed in the interview. Based on the interview and the foregoing claim/specification amendments, Applicant believes that the application is in condition for allowance.

**2. Patentability Remarks**

**a. 35 U.S.C. §112, Second Paragraph**

On page 4 of the Office Action, the Examiner rejects claims 35-38 under 35 U.S.C. §112, second paragraph, for allegedly being indefinite. Specifically, the Examiner asserts that the term “heterologous” is not defined by the claims or specification, and according to Merriam Webster, is “derived from different species.” The Examiner concludes that heterologous is determined only by comparison to another sequence, and the Applicant has failed to distinguish between vector elements required for vector function and the nucleic acid insert.

Amended vector claims 35-38 are now directed to a vector comprising a human insert, wherein the human insert consists of the sequence of the nucleic acid of claim 25, 26, 29, or 30, and wherein the vector comprises no other insert but the nucleic acid of claims 25, 26, 29, or 30. Applicant submits that the metes and bounds of the vector claims are now clear because the vector elements are now distinguished by the human nucleic acid sequences from claims 25, 26, 29, or 30. In view of the foregoing amendment and remarks, Applicant respectfully requests that the rejection of claims 35-38 under 35 U.S.C. §112, second paragraph, has been overcome and should be withdrawn.

**b. 35 U.S.C. §112, First Paragraph**

On pages 5 and 6 of the Office Action, the Examiner rejects claims 35-38 under 35 U.S.C. §112, first paragraph, for allegedly lacking proper written descriptive support. Specifically, the Examiner asserts that the term “heterologous sequence” does not appear in the specification in an explicit, implicit, or inherent matter.

Applicant submits that in view of the foregoing amendments, the phrase “the human insert consists of the nucleic acid of claims 25, 26, 29, or 30 is supported in paragraph 27 of the specification. Specifically paragraph 0027 states that vectors comprise the DNAs. The DNAs are nucleic acids comprising the claimed nucleic acid sequences of claims 25, 26, 29, or 30. These sequences are human origin. Accordingly, Applicant submits that one of skill in the art would recognize that the Applicant was in possession of the invention recited in the amended language of claims 35-38 at the time of filing. In view of the foregoing amendment and remarks, Applicant submits that the rejection of claims 35-38 under 35 U.S.C. §112, first paragraph, for allegedly lacking proper written descriptive support has been overcome and should be withdrawn.

### 3. Conclusion

Applicant respectfully submits that the instant application is in good and proper order for allowance and early notification to this effect is solicited. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the instant application, the Examiner is encouraged to call the undersigned at the number listed below.

Respectfully submitted,

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